14. Quorum sensing in *Candida* species

Mariana Henriques *(University of Minho, Braga, Portugal)*

Quorum sensing is the ability of micro-organisms to communicate, via signalling molecules, in order to coordinate their behaviour. Farnesol and tyrosol were the first molecules identified as *Candida albicans* quorum sensing molecules. Nowadays non-*Candida albicans Candida* species, as *Candida dubliniensis*, *Candida parapsilosis*, *Candida krusei*, *Candida glabrata* and *Candida tropicalis*, are emerging as pathogens and the identification of their extracellular molecules as well of their effect is of utmost importance.

Farnesol, which was firstly described as having an effect on *C. albicans* morphology and also on *C. dubliniensis*, was shown to affect *C. krusei*, *C. glabrata* and *C. tropicalis* growth in suspension, without affecting their morphology. Additionally other alcohols as 1-dodecanol, E-nerolidol, 2-phenylethanol and isoamylalchool, have been identified in *C. albicans* and *C. dubliniensis* suspended and sessile supernatants. Interestingly, phenylethanol production increases along time, both for planktonic and biofilm cells and for both species. These alcohols were also found to cause high inhibition of filamentation on those two species. Moreover, those molecules were also shown to be secreted by other *Candida* species and at physiological levels affected *C. parapsilosis* and *C. tropicalis* biofilms.